

U.S. Serial No. 10/828,283

NIT-316-02

IN THE CLAIMS

Claims 1-10 (Canceled)

11. (Currently amended) A storage apparatus for setting at least a logical volume over a plurality of physical storage devices, said apparatus comprising:

means for receiving a volume creation request specifying a requested average performance;

means for forming a judgment as to whether or not ~~all~~ logical volumes, which include present logical volumes that are already set and each sharing any of said storage devices with a logical volume to be created and said logical volume to be created, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said present logical volumes; and

means for setting said logical volume to be created if said ~~all-said~~ logical volumes each satisfy said requested average performance.

12. (Previously presented) A storage apparatus according to claim 11, wherein said information of requested average performance is based on performance information

U.S. Serial No. 10/828,283

NIT-316-02

collected by a client computer which accesses said storage apparatus.

13. (Currently amended) A storage apparatus according to claim 12, further comprising:

means for receiving an unoccupied-area-searching request specifying information on said requested average performance;

means for forming a judgment as to whether or not ~~all~~ logical volumes, which include present logical volumes that are already set and said new volume supposed to be added to said present logical volumes, each satisfy its requested average performance by referring to said information of requested average performance for each of said present logical volumes which share any of said storage devices with an unoccupied area; and

means for displaying information on said area if ~~all~~ said logical volumes each satisfy said requested average performance.

14. (Currently amended) A computer system comprising a storage apparatus, a client computer which accesses said storage apparatus, and a volume management apparatus which

U.S. Serial No. 10/828,283

NIT-316-02

sets at least a logical volume over a plurality of physical storage devices residing in said storage apparatus,

said client computer having means for transmitting a volume creation request specifying a requested average performance to said volume management apparatus, and

said volume management apparatus comprising:

means for receiving said volume creation request from said client computer;

means for forming a judgment as to whether or not ~~all~~ logical volumes, which include present logical volumes that are already set and each sharing any of said storage devices with a logical volume to be created and said logical volume to be created, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said present logical volumes; and

means for setting said logical volume to be created if said ~~all-said~~ logical volumes each satisfy said requested average performance.

15. (Previously presented) A computer system according to claim 14, wherein said information of requested average

U.S. Serial No. 10/828,283

NIT-316-02

performance is based on performance information collected by said client computer.

16. (Previously presented) A computer system according to claim 14, wherein said information of requested average performance is based on performance information obtained by said storage apparatus.

17. (Currently amended) A computer system comprising a storage apparatus, a client computer which accesses said storage apparatus, and a volume management apparatus which sets at least a logical volume over a plurality of physical storage devices residing in said storage apparatus,

said client computer having means for transmitting a volume creation request specifying a requested average performance to said volume management apparatus, and

said storage apparatus comprising:

means for receiving said volume creation request from said client computer;

means for forming a judgment as to whether or not all logical volumes, which include present logical volumes that are already set and each sharing any of said storage devices with a logical volume to be created and said logical

U.S. Serial No. 10/828,283

NIT-316-02

volume to be created, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said present logical volumes; and

means for setting said logical volume to be created if said ~~all said~~ logical volumes each satisfy said requested average performance.

18. (Previously presented) A computer system according to claim 17, wherein said information of requested average performance is based on performance information collected by said client computer.

19. (Previously presented) A computer system according to claim 17, wherein said information of requested average performance is based on performance information obtained by said storage apparatus.

20. (Currently amended) A volume management method for setting at least a logical volume over a plurality of physical storage devices residing in a storage apparatus, said method comprising the steps of:

U.S. Serial No. 10/828,283

NIT-316-02

receiving a volume creation request specifying a requested average performance;

forming a judgment as to whether or not ~~all~~ logical volumes, which include present logical volumes that are already set and each sharing any of said storage devices with a logical volume to be created and said logical volume to be created, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said present logical volumes; and setting said logical volume to be created if said ~~all~~ said logical volumes each satisfy said requested average performance.

21. (Previously presented) A volume management method according to claim 20, wherein said information of requested average performance is based on performance information collected by a client computer which accesses said storage apparatus.

22. (Previously presented) A volume management method according to claim 20, wherein said information of requested average performance is based on performance information obtained by said storage apparatus.

U.S. Serial No. 10/828,283

NIT-316-02

23. (Currently amended) A computer system comprising a storage apparatus, a client computer which accesses said storage apparatus, and a volume management apparatus which searches for an unoccupied area used by a new logical volume over a plurality of physical storage devices residing in said storage apparatus,

said client computer having means for transmitting an unoccupied-area-searching request specifying information on requested average performance to said volume management apparatus, and

said volume management apparatus comprising:

means for receiving said unoccupied-area-searching request from said client computer;

means for forming a judgment as to whether or not all logical volumes, which include present logical volumes that are already set and said new volume supposed to be added to said present logical volumes, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said present logical volumes which share any of said storage devices with an unoccupied area; and

U.S. Serial No. 10/828,283

NIT-316-02

means for displaying information on said area if ~~all~~ said logical volumes each satisfy said requested average performance.

24. (Currently amended) A computer system comprising a storage apparatus and a client computer which accesses said storage apparatus, said storage apparatus searching for an unoccupied area used by a new logical volume over a plurality of physical storage devices residing in said storage apparatus,

said client computer having means for transmitting an unoccupied-area-searching request specifying information on requested average performance to said storage apparatus, and

said storage apparatus comprising:

means for receiving said unoccupied-area-searching request from said client computer,

means for forming a judgment as to whether or not ~~all~~ logical volumes, which include present logical volumes that are already set and said new volume supposed to be added to said present logical volumes, each satisfy its requested average performance by referring to information of requested average performance on a storage means for each of said



U.S. Serial No. 10/828,283

NIT-316-02

present logical volumes which share any of said storage devices with an unoccupied area; and

means for displaying information on said area if all said logical volumes each satisfy said requested average performance.